

WHAT IS CLAIMED IS:

1. An electronic apparatus for performing
a wireless communication by selectively using one of
a first wireless communication device for performing
5 wireless communication by a first wireless communica-
tion system and second wireless communication device
for performing wireless communication by a second
wireless communication system, the electronic apparatus
comprising:

10 means for storing base station information
relating to a position of a base station corresponding
to the first wireless communication system and
a position of a base station corresponding to the
second wireless communication system;

15 a position detector for detecting a current
position of the electronic apparatus; and

a switching device for switching between the first
wireless communication device and the second wireless
communication device based on the current position of
20 the electronic apparatus detected by the position
detector and the base station information.

2. The electronic apparatus according to claim 1,
wherein the switching device includes:

means for retrieving an ID of a base station
25 having a communication area that covers the current
position of the electronic apparatus detected by the
position detector from the base station information;

and

means for selecting one of the first wireless
communication device and the second wireless
communication device to be used for communication in
5 accordance with a wireless communication system
corresponding to the ID of the base station retrieved
by the retrieving means.

3. The electronic apparatus according to claim 1,
wherein the electronic apparatus is in-vehicle
10 electronic equipment installed in a vehicle, and
the position detector includes means for detecting
a current position of the vehicle.

4. The electronic apparatus according to claim 2,
wherein the first wireless communication system has
15 a communication speed that is higher than that of the
second wireless communication system, and the switching
device includes means for selecting the first wireless
communication device as having a higher priority than
the second wireless communication device when the
20 retrieving means retrieves a base station ID corre-
sponding to the first wireless communication system and
also a base station ID corresponding to the second
wireless communication system.

5. The electronic apparatus according to claim 2,
25 wherein the electronic apparatus is in-vehicle
electronic equipment installed in a vehicle, the first
and second wireless communication systems differ from

each other in a communication area covered, and the electronic apparatus further comprises speed detecting means for detecting a speed of the vehicle, and the switching device includes means for selecting between
5 the first and second wireless communication devices in accordance with the speed of the vehicle detected by the speed detector when the retrieving means retrieves a base station ID corresponding to the first wireless communication system and also a base station ID
10 corresponding to the second wireless communication system.

6. The electronic apparatus according to claim 1, wherein the switching device includes means for establishing a connection with a partner to which one
15 of the first and second wireless communication device is connected, using the other of the first and second wireless communication devices, when the switching device switches from the one of the first and second wireless communication to the other thereof.

20 7. The electronic apparatus according to claim 1, further comprising:

means for predicting one of base stations corresponding to the wireless communication system of one of the first and second wireless communication
25 devices as a base station targeted for roaming, based on the current position of the electronic apparatus detected by the position detector and the base station

information; and

means for performing a roaming process for switching the base station from a currently wirelessly connected base station to the predicted base station.

5 8. A wireless communication control method which controls wireless communication performed by an electronic apparatus capable of selectively using one of a first wireless communication device for performing wireless communication by a first wireless communication system and second wireless communication device
10 for performing wireless communication by a second wireless communication system, the method comprising:

detecting a current position of the electronic apparatus; and

15 switching between the first wireless communication device and the second wireless communication device based on base station information relating to a position of a base station corresponding to the first wireless communication system and that of a base
20 station corresponding to the second wireless communication system and the detected current position of the electronic apparatus.

9. The wireless communication control method according to claim 8, wherein the switching includes:

25 retrieving a base station ID having a communication area that covers the detected current position of the electronic apparatus from the base station

information; and

selecting one of the first wireless communication device and the second wireless communication device in accordance with a wireless communication system
5 corresponding to the retrieved ID of the base station.

10. The wireless communication control method according to claim 8, wherein the electronic apparatus is in-vehicle electronic equipment installed in a vehicle, and the detecting includes detecting a current
10 position of the vehicle.

11. The wireless communication control method according to claim 9, wherein the first wireless communication system has a communication speed that is higher than that of the second wireless communication
15 system, and the switching includes selecting the first wireless communication device as having a higher priority than the second communication device when an ID of a base station corresponding to the first wireless communication system and also an ID of a base
20 station corresponding to the second wireless communication system are retrieved.

12. The wireless communication control method according to claim 9, wherein the electronic apparatus is in-vehicle electronic equipment installed in a
25 vehicle, the first and second wireless communication systems differ from each other in communication area covered by their respective base stations, the method

further comprises detecting a moving speed of the vehicle, and the switching includes selecting from the first and second wireless communication devices in accordance with the detected moving speed of the vehicle when an ID of a base station corresponding to the first wireless communication system and also an ID of a base station corresponding to the second wireless communication system are retrieved.

13. The wireless communication control method according to claim 8, wherein the switching includes establishing a connection with a partner to which one of the first and second wireless communication devices is connected, using the other of the first and second wireless communication devices means, switching device switches from the one of the first and second wireless communication to the other thereof.

14. The wireless communication control method according to claim 8, further comprising:

predicting one of base stations corresponding to the wireless communication system of one of the first and second wireless communication devices as a base station targeted for roaming, based on the detected current position of the electronic apparatus and the base station information; and

performing a roaming process for switching the base station from a currently wirelessly connected base station to the predicted base station.

15. The electronic apparatus according to claim 1 further including a position direction determining device for determining the current direction of movement of the electronic apparatus and wherein the
5 switching device switches between the first and second wireless communication devices based additionally on the current direction of movement of the electronic apparatus.

16. The electronic apparatus according to claim 7
10 further including a position direction determining device for determining the current direction of movement of the electronic apparatus and wherein the predicting means also additionally utilizes on the current direction of movement of the electronic
15 apparatus to determine the base station targeted for roaming.

17. The electronic apparatus according to claim 8 further including determining the current direction of movement of the electronic apparatus and wherein the
20 switching between the first and second wireless communication devices based additionally on the current direction of movement of the electronic apparatus.

18. The electronic apparatus according to claim 14 further including determining the current direction of movement of the electronic apparatus and wherein the
25 predicting also additionally utilizes on the current direction of movement of the electronic apparatus to

determine the base station targeted for roaming.

19. An electronic apparatus for performing a wireless communication by selectively using one of a first wireless communication device for performing
5 wireless communication by a first wireless communication system and second wireless communication device for performing wireless communication by a second wireless communication system, the electronic apparatus comprising:

10 means for storing base station information relating to an environment of a base station corresponding to the first wireless communication system and an environment of a base station corresponding to the second wireless communication system;

15 a position detector for detecting a current position of the electronic apparatus; and

a switching device for switching between the first wireless communication device and the second wireless communication device based on the current position of
20 the electronic apparatus detected by the position detector and the base station information.

20. A wireless communication control method which controls wireless communication performed by an electronic apparatus capable of selectively using one
25 of a first wireless communication device for performing wireless communication by a first wireless communication system and second wireless communication device

for performing wireless communication by a second wireless communication system, the method comprising:

detecting a current position of the electronic apparatus; and

5 switching between the first wireless communication device and the second wireless communication device based on base station information relating to an environment of a base station corresponding to the first wireless communication system and that of a base
10 station corresponding to the second wireless communication system and the detected current position of the electronic apparatus.